

Hazardous Waste Management Commission Report

October through December 2010

Quarterly Report



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

The Syndicate Trust Building site during renovation. The building was redeveloped into retail space, rental apartment units, condominium units and parking.

Hazardous Waste Management Commissioners

James T. "Jamie" Frakes, Chair

Andrew Bracker, Vice-Chair

Elizabeth Aull

Michael R. Foresman

Charles Adams

Deron Sugg

"The goal of the Hazardous Waste Program is to protect human health and the environment from threats posed by hazardous waste."

For more information

Missouri Department of Natural Resources

Hazardous Waste Program

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Missouri Department of Natural Resources
Hazardous Waste Program

December 2010 Program Update

This quarter we wrapped up another year. Well, a calendar year, to be specific.

We tend to focus a little more on the state and federal fiscal years – which end in June – but calendar years are also important. One reason is they give us an opportunity to reflect on what the program has accomplished in the previous 12 months.

We moved forward on one of my priorities for the program: developing Tanks Risk-Based Corrective Action Rules. We held a well-attended webinar in December that brought together environmental consultants, health professionals, city representatives, school districts, tank owners and other interested/potentially affected groups. It was a good start. More information on this subject is included in the Special Section of this report.

The Superfund Section ended a very large investigation in northwest Missouri. The massive scope of this project can not be understated. It spread across multiple farms in four counties. The section worked closely with other agencies in their comprehensive analysis of the hundreds of samples that were taken from farm fields, residential yards and drinking water wells.

At the end of Compliance and Enforcement's portion of these reports, there's usually a small paragraph on their listserv. This paragraph typically discusses what latest topics were sent out through their listserv. This listserv – a simple e-mail sent once a month – is a valuable tool the section uses to share compliance information to the regulated community. The section sent out regular compliance tips throughout 2010.

The Permits Section, in their part of this report, summarizes some of their 2010 activities. Take a look at the photo of the permit application, to get a sense of what the section deals with through out the year.

With the high number of sites that come through the Tanks Section, it can be difficult to stop and celebrate some of the successes. But, the section was able to do just that at a grand-opening of the Route 66 Information Center in Webb City. This was an old, crumbling building the city wanted to keep, to rehabilitate. The Tanks Section really stepped in and helped the city deal with the underground storage tank issues that were present at the site.

And most of this work was funded either in part, or in full, by fees. The Budget and Planning Section does a nice job of breaking down the fees the program receives. Without these fees, there would be no Hazardous Waste Program or Hazardous Waste Management Commission.

Despite all of the challenges, 2010 was a good year. That being said, 2011 is shaping up to be a very active and successful year in the Hazardous Waste Program. We have revamped the Hazardous Waste Forum, have multiple rulemakings in the works and many of the sections – like Tanks and the Brownfields/Voluntary Cleanup Program – have no plans to slow down the number of sites they oversee and help to clean.

We will continue to report on these successes to you, the commissioners.

Thank you,



David J. Lamb
Hazardous Waste Program

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Missouri Department of Natural Resources - Hazardous Waste Program

Gov. Nixon selects Sara Parker Pauley as Director of Missouri Department of Natural Resources

Gov. Jay Nixon selected Sara Parker Pauley in December as the new director of the Missouri Department of Natural Resources. In her new position, Ms. Pauley, 45, will lead the governor's efforts to grow the state economy by accelerating the development of renewable sources of energy, creating next-generation "green" jobs and promoting energy independence in the state. Pauley also will manage agencies and programs focused on managing Missouri's state parks and historic sites and preserving and improving the state's natural and cultural resources.



"We were looking for a leader prepared to meet the challenges of environmental stewardship and sustainable economic development in the 21st Century," Gov. Nixon said. "Sara Parker Pauley has a breadth of experience - and a proven track record of success - helping government, business and non-profit groups find common ground and build consensus. That is the kind of problem-solving we need to promote new opportunities for "green" business practices across the economic spectrum - including within state government - and to accelerate the state's development of renewable sources of energy, including wind, solar and biofuels."

"In addition, as a lifelong conservationist, hunter and outdoorswoman, I know Ms. Pauley appreciates the value of Missouri's priceless natural and cultural resources, including our outstanding system of state parks, and the importance of preserving, protecting and improving this legacy."

"I grew up outdoors - hunting and fishing in the Ozarks with my grandparents and my parents -- so caring for and respecting Missouri's outstanding natural resources is a value that goes back generations in my family," Ms. Pauley said. "I also believe economic growth and environmental stewardship are not mutually exclusive; resource management always works best when all stakeholders work together."

"Advancing Gov. Nixon's agenda by developing new sources of clean, abundant energy is essential to growing our economy, promoting Missouri's energy independence and creating a greener, healthier, more prosperous state," Ms. Pauley said. "I look forward to working with the business community, members of the legislature, the public and the environmental community to make Missouri a leader in renewable energy, in resource conservation, and in protecting our outdoor heritage for generations to come."

Ms. Pauley replaces former DNR Director Mark N. Templeton, who resigned in August to become Executive Director of the Office of the Independent Trustees of the Deepwater Horizon Oil Spill Trust. Following Templeton's resignation, Gov. Nixon appointed a nine-person committee to conduct a nationwide search for his replacement. Gov. Nixon named Kip Stetzler acting director during the search; Mr. Stetzler has been the Director of the Western Regional Office of the Governor in Kansas City.

A native of Columbia, Ms. Pauley had been a project manager for D.J. Case & Associates, a natural resources communications firm, where she worked with federal and state agencies on policy development, marketing and environmental compliance.

Missouri Department of Natural Resources - Hazardous Waste Program

In 2006-2007, she was Executive Vice President of PrimeGen Power USA, a start-up distributed power energy company based in Missouri, where she was responsible for market research and development for electric utilities and the U.S. military.

From 2001 to 2005, Ms. Pauley was deputy director of the Missouri Department of Natural Resources, serving as its public liaison to diverse constituencies including the business community and environmental groups. She also oversaw the staff and budgets of the State Historic Preservation Office, Energy Center, Technical Assistance Office and Communications Office.

"Sara is a consensus-builder," said former DNR Director Steve Mahfood. "She has the ability to listen to all sides, communicate effectively and confidentially, and identify common ground. Those are critical skills in a position such as this one, where you must continually balance the goals of economic growth, the need for jobs and the protection of our land, water and air."

Ms. Pauley was chief of staff to former Missouri House Speaker Steve Gaw from 1996-1998, working as a liaison with legislators, lobbyists and other constituent groups.

Ms. Pauley received both her law degree and her bachelor's degree in journalism from the University of Missouri - Columbia, and did post-graduate studies in Australia as a Rotary Fellow. She was an instructor at the University of Missouri's School of Natural Resources, where she taught a course in natural resource policy and administration. She is also a graduate of Columbia's Hickman High School.

A lifelong conservationist and an avid hunter, Pauley has been an executive committee and board member of the Conservation Federation of Missouri. She was a member of the board of the American National Fish & Wildlife Museum, where she served as director of conservation programs from 2005-2006. She has published a number of articles on wildlife and natural resources management.

Ms. Pauley and her husband, Scott, a professional bass fisherman, live in Hartsburg. Scott Pauley is a 30-year veteran of the Missouri State Highway Patrol.

Tanks Risk-Based Corrective Action Stakeholder Group

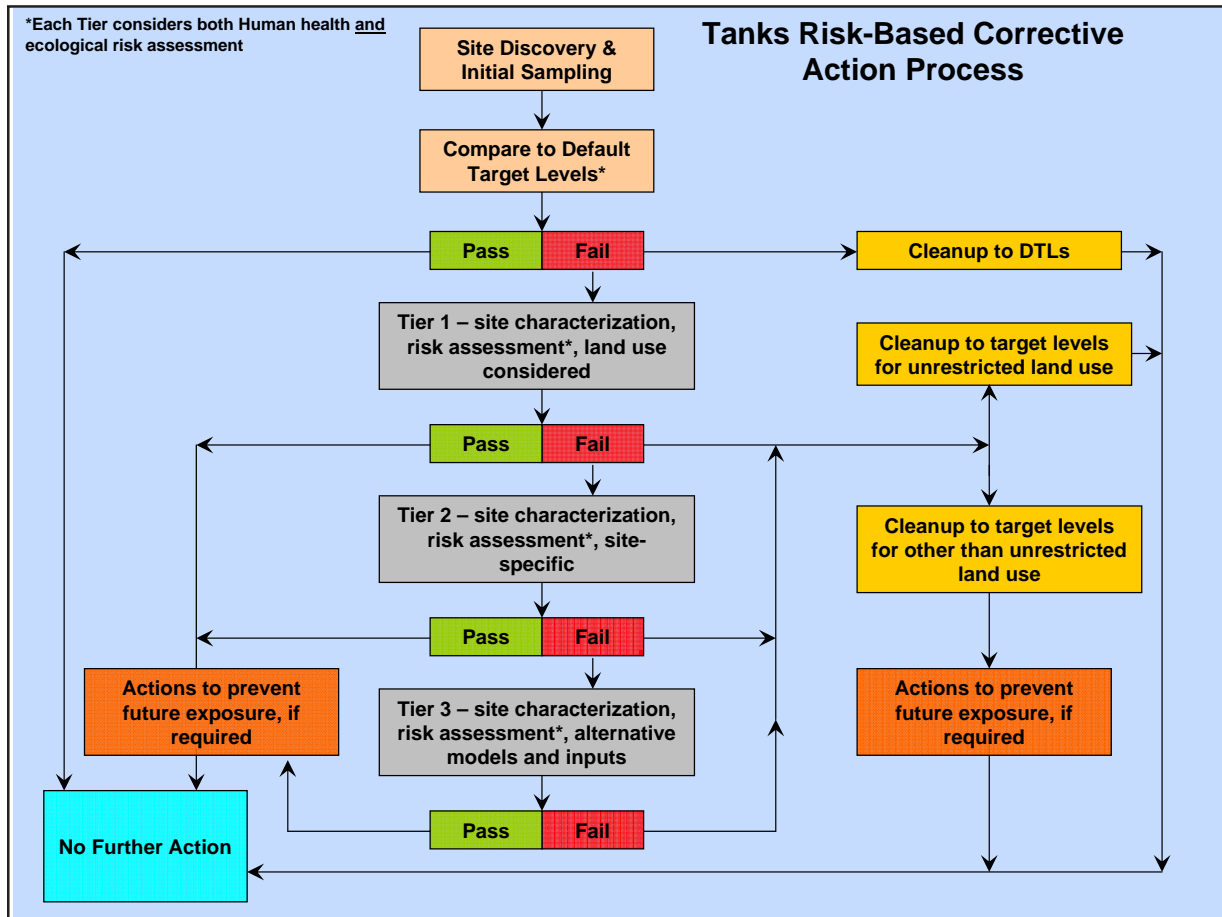
At the October 14 Hazardous Waste Management Commission meeting, the commissioners directed the Hazardous Waste Program to arrange a stakeholder meeting in December to start anew the tanks risk-based corrective action rulemaking process.

The program quickly began compiling lists of potential stakeholders and sending out invitations to a webinar, or Internet-based presentation. Hazardous Waste Program staff sent invitations to thousands of potential stakeholders, including tank owners, environmental consultants, county health departments and other groups and individuals.

The webinar provided participants with an overview of the history of the rulemaking efforts and the risk-based corrective action process and outlined the remaining rule issues to be addressed by the stakeholder group. Approximately 75 participants logged onto the webinar and 15 attended the meeting in person.

The primary goal of the webinar was to solicit participation for a stakeholder group to assist the department in developing tanks RBCA rules. The stakeholder group is made up of two parts:

- Core Group – will meet regularly in Jefferson City in 2011 to discuss specific technical, structural and organizational aspects of the rules and assist the department in developing draft rule language
- Advisory Group – will be informed of the issues under discussion and be provided regular opportunities to review and comment on rule language and other documents created by the core group.



The department and the core group will review all input provided by the advisory group and amend draft rule language and other documents accordingly.

The stakeholder group will discuss the following issues, among others:

- What should be required when contamination is left in-place?
- How much investigation should be required?
- What should be required when contamination migrates onto someone else's property?
- Requirements regarding collection of data for development of site-specific target levels at Tier 2 of the Risk-Based Corrective Action process.
- Application of Risk-Based Corrective Action at underground storage tank closure.
- Required duration of groundwater monitoring for plume stability evaluations.
- Developing representative contaminant concentrations for use in risk assessments.
- Free product recovery requirements.
- Default Target Levels.

Approximately 28 individuals volunteered to be part of the core group and 43 agreed to be on the advisory group.

All information relating to the stakeholder group, including a list of participants, all documents discussed during the core group's meetings and a recording of the webinar is online at dnr.mo.gov/env/hwp/tanks/mrbca-pet/rbcarulemaking.htm.

Hazardous Waste Fees

Protecting Missouri from Hazardous Waste

The Missouri Department of Natural Resources works to protect Missouri and Missourians from threats posed by hazardous waste and other contaminants. The department assures cleanup of pollution, promotes safe waste management and prevents future public exposure to hazardous waste. The department helps Missouri businesses comply with hazardous waste regulations and produce less waste. The department also works with developers through our Brownfields/Voluntary Cleanup Program to provide state oversight for voluntary cleanups of properties contaminated with hazardous substances in order to help facilitate redevelopment at the site. The cooperation and success of working with businesses, local officials and citizens promotes a healthy economy and environment.

The fees paid to the department by businesses that handle or generate hazardous waste, plus a 50-cent fee on lead-acid batteries, provide more than \$2 million annually to support these core activities. The program's Budget and Planning Section is responsible for coordinating, collecting and tracking the payment of these fees.

Some examples of work conducted by the department related to hazardous waste include:

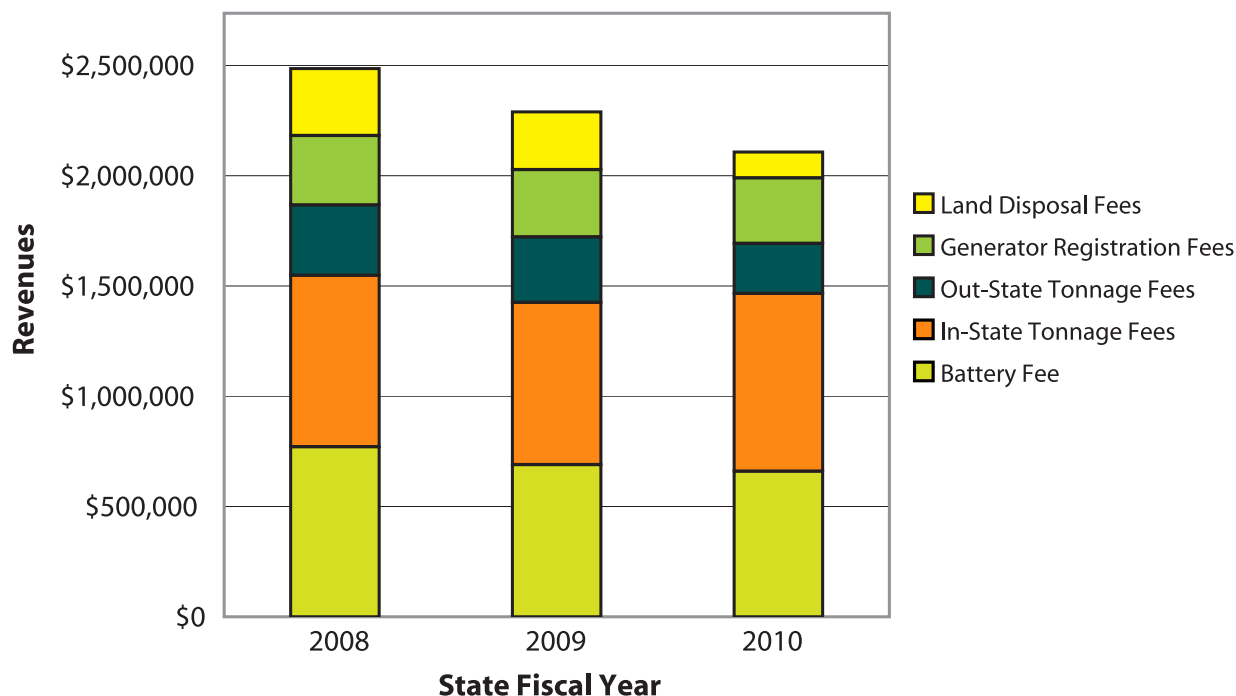
- Ensuring proper registration and reporting for businesses that handle or generate hazardous waste.
- Hazardous Waste Management Commission and forum meetings that allow citizens and businesses the opportunity to provide input into issues regarding Missouri's hazardous waste management.
- Inspecting, assisting and assuring compliance at hazardous waste facilities.
- Permitting of treatment, storage and disposal facilities.
- Investigating and directing or providing oversight of cleanup at hazardous waste sites.
- Providing public and technical assistance for state and federal hazardous waste regulations.
- Protecting potential property buyers and facilitating redevelopment by maintaining information about currently contaminated sites or sites that have been cleaned up.
- Initiating contract cleanups where emergency environmental response has been required.
- These fees are also used to leverage federal funding by providing required state match to federal grants for Missouri's environmental programs.

Missourians Protecting Missouri

These fees allow the department to maintain a Hazardous Waste Program and help keep Missourians in charge of Missouri hazardous waste decisions. Missouri businesses and citizens are able to become involved in the decision-making process through groups like the Hazardous Waste Forum, Hazardous Waste Management Commission and other stakeholder groups. The department is able to provide compliance assistance and flexibility that may not be available at the federal level. Permitted facilities currently can call Missouri staff to work together on permit issuance or modification issues and concerns. Department staff are committed to Missouri, we strive to protect our state resources, our neighbors and our economy.

Missouri's program provides an opportunity for state government to partner with businesses and federal agencies to keep Missourians safe from the threats of hazardous pollutants to ensure a healthy environment and economy.

Revenues from Hazardous Waste Generator and Battery Fees



Hazardous Waste Fees

Battery Fee - 260.262 RSMo. - Sunsets 06/30/2011

- This fee is collected by retailers and transmitted to the Missouri Department of Revenue quarterly.
- The fee of 50 cents per battery greater than 6 volts sold at retail is paid by consumers; however, this fee is not paid on batteries sold for use in agricultural operations.
- Revenues from this fee were \$659,823 in Fiscal Year 2010.

Billings for the following fees are based on information reports filed by hazardous waste generators and treatment, storage and disposal facilities. Combined revenues from these fees were approximately \$1.4 million in Fiscal Year 2010.

In-State Waste Fee - 260.380 RSMo. - Sunsets 12/31/2011

All Missouri hazardous waste generators pay \$5 per ton of hazardous waste generated with a \$150 minimum and \$52,000 maximum annual fee per site.

Out-of-State Waste Fee - 260.380 RSMo. - Sunsets 12/31/2011

All Missouri permitted treatment, storage and disposal facilities pay \$2 per ton for all hazardous waste received from a generator site located outside of Missouri. There is no annual minimum or maximum.

Generator registration fee - 260.380 RSMo. - Sunsets 12/31/2011

All Missouri hazardous waste generators pay a \$100 initial registration and annual renewal fee to maintain an active registration.

Land Disposal Fee - 260.475 RSMo. - Sunsets 12/31/2011

Generators pay \$25 a ton on waste placed into or on the land as final disposition; not charged for less than 10 tons; no minimum or maximum.

Landfill Tax - 260.390 RSMo - Sunsets 12/31/2011

- Two percent of gross charges and fees charged to generators for disposal in a landfill.
- Currently there are no available landfills, therefore, there are no revenues from this tax.

Missouri Department of Natural Resources - Hazardous Waste Program Budget and Planning Section

Budget and Planning

Other Hazardous Waste Program Fees

Commercial Facility Inspection Fee - 260.370 RSMo.

Tiered fee based on the amount of hazardous waste received from off-site; amounts are \$9,800, \$10,800 or \$12,000 with no sunset date.

Cost Recovery – Permits - 260.375 & 260.395 RSMo; Leaking Underground Storage Tanks -260.530 and 319.125 RSMo; Superfund and Federal Facilities - Consent Agreements, Voluntary Cleanup Program (noted below).

Staff time, and related costs are recovered by use of multiplier; other actual expenses recovered dollar for dollar with no sunset date.

Permit Fees.

\$10,000 for a 10-year permit, continuation. \$1,000 per year with no sunset date.

Resource Recovery Certificate Fees.

\$500 per site for two years, \$1,000 per site for two years for a commercial site with no sunset date.

Permit, Resource Recovery certification and engineering review fees - 260.475 and 260.405 RSMo.

Staff time, fringe and indirect recovered by use of multiplier; other actual expenses recovered dollar by dollar with no sunset date.

Transporter license fee - 260.395 RSMo.

Based on mileage travelled in Missouri and tonnage of hazardous waste with no sunset date.

Brownfields/Voluntary Cleanup Program

Application fee - 260.565-260.575 RSMo.

\$200 with no sunset date.

Initial deposit - 260.565-260.575 RSMo.

Varied based on situation; no more than \$5,000 with no sunset date. Actual costs are billed against this deposit.

Monitoring fee - 10 CSR 25-15.010 (8) (A) .3.

Varied based on complexity of site; \$5,000 to \$15,000 with no sunset date.

Drycleaning Environmental Response Trust Fund

Drycleaner registration fee - 260.935 RSMo.

- Tiered fee based on the number of gallons of chlorinated solvent used in previous calendar year; \$500, \$1,000 to \$1,500.
- Sunsets 8/28/2012.

Solvent surcharge - 260.940 RSMo.

- \$8 per gallon of drycleaning solvent sold by solvent supplier.
- Sunsets 8/28/2012.

Underground Storage Tanks

Underground Storage Tank registration fee - 10 CSR 20-10.022, 319.123 RSMo.

\$15 per tank per year; assessed on a rotating basis for a five year period with no sunset date.

Transporter lincensing fee - RSMo 260.395

Truck - \$200 application fee plus use fee.

Railroad - \$350 application fee.

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

The Missouri Department of Natural Resources issued certificates of completion for 10 Brownfields/Voluntary Cleanup Program sites during October through December.

Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant. Through the Brownfields/Voluntary Cleanup Program, private parties agree to clean up a contaminated site and are offered some protection from future state and federal enforcement action at the site in the form of a "No Further Action" letter or "Certificate of Completion" from the state.

FMC Spill Site

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the FMC Spill Site located at Hwy. 34 near Bear Creek in Clubb. The 4.35-acre FMC Spill Site was where a tanker truck carrying unleaded gasoline overturned in July 1996, releasing approximately 6,000 gallons of fuel. Emergency response activities removed surface accumulations of free product.

Site investigations revealed the presence of free product gasoline in the soil and groundwater at the property. The highest concentration of gasoline constituents was identified at the monitoring well south of Missouri State Route 34. Since 1996, a number of remediation efforts were conducted, including air sparging, pump and treat and dual phase extraction. In December 1999, the department's Environmental Services Program approved natural attenuation monitoring for the site. In January 2000 the remediation system was closed down, dismantled and removed from the site. The contamination has not been documented in Bear Creek nor in a nearby drinking water well. However, petroleum-related contaminants continue to be detected in monitoring wells at the site. Therefore, the Environmental Services Program referred the site to the Brownfields/Voluntary Cleanup Program for oversight.

A Tier I Risk Assessment was performed according to the Missouri Risk-Based Cleanup Action Technical Guidance (June 2006) and demonstrated the domestic use of groundwater was the only complete pathway for the property. An environmental covenant was filed in the chain of title for the property prohibiting use of groundwater and restricting land use to non-residential. The department determined the site is safe for its intended use.

Jump Oil Tanker Release

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Jump Oil Tanker Release site located at the junction of Hwy. 32 and Hwy K in Filley. The Jump Oil Tanker Release Site was where a tanker truck carrying unleaded gasoline overturned along the highway shoulder on Missouri Department of Transportation property, releasing approximately 2,160 gallons of fuel. The site is about 45 by 60 feet in size.

The groundwater plume was evaluated after several quarters of groundwater monitoring. Emergency response activities removed approximately 150 gallons of free phase product, 3,700 gallons of petroleum impacted water and 1,152 tons of petroleum impacted soil. However, due to safety concerns, not all of the impacted soil could be excavated. Dissolved phase petroleum constituents were found in monitoring wells installed near the release. The plume appears to be stable and all lab data indicates the concentrations of contaminants of concern are below the Missouri Risk-Based Corrective Action default target levels, which correspond with EPA's maximum contaminant levels recommended to be safe for drinking water. Elevated levels of benzene remain in the center of the excavation. However, this elevated level of benzene does not appear to be contributing to groundwater contamination outside the excavation area and seems to be trapped within the immediate area of the excavation. Long-term monitoring has been conducted on

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

several drinking water wells in the immediate area and none have shown any signs of contamination resulting from the release. Additionally, monitoring wells up and downgradient of the release have not shown indications of contamination above the default target levels. The department determined the site is safe for its intended use.

St. Louis Post-Dispatch Printing Building

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the St. Louis Post-Dispatch Printing Building site. The site is comprised of two adjoining parcels at 1111 Olive and 1112 Locust streets. The parcels are 0.565 and 0.181 acres, respectively. A five-story office building is located on the Olive Street parcel. Currently the basement, first and second floors are used for parking. Past uses of the property have included printing and radio and television broadcasting. The Locust Street parcel is currently a parking lot. Past uses have included printing and a laboratory. Asbestos and lead-based paint were known to exist in the building, along with an aboveground storage tank, which was reported to have contained kerosene.

Soil and groundwater samples were taken at the site. Contaminants in groundwater were all below the default target levels, the lowest risk-based numbers in the Missouri Risk-Based Corrective Action guidance. Contaminants in soil were all below the risk-based target levels for residential use.

Asbestos-containing material and lead-based paint were removed from the building. Some enclosed or encapsulated asbestos-containing material and lead-based paint was left in the building. An Operations and Maintenance Plan is in place, providing procedures in the event any remaining asbestos-containing material or lead-based paint is disturbed. Miscellaneous hazardous materials were also removed from the building. These include fluorescent light bulbs, ballasts containing polychlorinated biphenyls, waste oil, thermostats and smoke alarms. The department determined the site is safe for its intended use.

The site is being redeveloped for commercial office space.

Roto-Die Company Inc.

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Roto-Die Company Inc. site located at 455 East Clinton Place in Kirkwood. The site is a .52 acre lot formerly occupied by Roto-Die, which manufactured rotary dies, and later a car wash equipment manufacturer. Currently, the site is occupied by a can equipment manufacturer. DCE, TCE, PCE and TCA were detected in soils during initial investigations.

Initial investigations detected chlorinated solvents, including PCE, TCE, DCE and TCA, in soils and groundwater. All contaminants were found to be below the Missouri Risk-Based Corrective Action (June, 2006) guidance document risk-based target levels for residential standards except for a small area of surface soil contamination. The small area of metals contamination was excavated, and confirmation samples indicated the contamination has been removed to below default target levels.

Groundwater on-site was found to have chlorinated solvent contamination below the residential risk-based target levels for vapor intrusion and the plume has been demonstrated to be stable. The drinking water pathway on-site is considered incomplete. The department determined the site is safe for its intended use.

Greyhound Bus Terminal (Former)

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the former Greyhound Bus Terminal site located at 700 E. 12th St. in Kansas City. According to historical research, site uses from 1896 through 1906 included residences, a laundry, a trunk manufacturer and a paint store. From 1939 until 1958, other uses included a plumbing business, a mattress and furniture factory, a machine shop, a private garage, a filling station on the site's northwest corner and a small garage/filling station on the site's east side. In



Former Greyhound Bus Terminal site.

1967, the Greyhound Lines Bus Terminal was constructed. This terminal consisted of a multi-level parking structure and terminal facility, including a diesel fuel underground storage tank and a waste oil underground storage tank. Terminal operations ended sometime between 1986 and 1990. The terminal reopened as a sporting goods store from 1990 to 1994. The prior owner acquired the property in 1994 and operated it as a parking structure until 2003, after which it remained vacant. The building has been removed and the site is currently graded and seeded with grass. Contamination consists of asbestos-containing materials identified by a hazardous substance survey. Asbestos-containing materials was identified in thermal system insulation, ventilation ducts, pipe wrap, transite panels, floor tile and mastic throughout the basement and upper levels of the structure.

Site investigations revealed the following:

- Asbestos-containing material throughout the building.
- Two registered underground storage tanks.
- Household hazardous waste materials (mercury-containing devices, fluorescent light ballasts and corrosive liquids) inside the building.
- Elevated levels of total petroleum hydrocarbons were detected in soils adjacent to the area where the underground storage tanks were located.

Remedial activities included:

- Removing all asbestos-containing material from the building in accordance with local, state and federal laws.
- Demolishing the building, crushing concrete and recycling steel.
- Properly removing two underground storage tanks and associated piping in accordance with Missouri Risk-Based Corrective Action (No Further Action Letter obtained from the Tanks Section on June 17, 2010).
- Screening and sampling of the exposed soils to determine whether soils were within MRBCA standards for unrestricted use.

The department determined the site is safe for its intended use.

The planned future use is to sell this property to the General Services Administration in order for General Services to construct a new secure facility with associated parking.

Missouri Department of Natural Resources - Hazardous Waste Program

Brownfields/Voluntary Cleanup Section

Borders Container Corporation

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Borders Container Corporation site located at 1788 N. Lindbergh Blvd. in St. Louis. The site is comprised of two buildings, an office/manufacturing area, which is used to manufacture corrugated boxes along with associated printing operations and a warehouse. Wellington Environmental's site assessments identified the presence of heating oil underground storage tanks under the manufacturing building and a former gasoline underground storage tanks near the southeast corner of the warehouse that was removed several years ago. Wellington's subsurface soil investigation identified the presence of petroleum hydrocarbon contamination in the soil.

Soil sampling in the area of the heating oil and former gasoline underground storage tanks identified the presence of total petroleum hydrocarbons-diesel range organics in the area of the heating oil underground storage tanks. No remediation of the soil was necessary because the diesel range organics concentrations were below the departmental Missouri Risk-Based Corrective Action Technical Guidance (June 2006) default target levels. The heating oil underground storage tank was properly disposed of after being removed.

Analytical results of the soil sampling in the area of the former gasoline underground storage tanks identified the presence of total petroleum hydrocarbons - gasoline range organics, benzene, naphthalene and toluene. The contaminant levels were above the Missouri Risk-Based Corrective Action default target levels. Subsequently, a Tier 1 Risk Assessment was conducted using the representative concentrations of the contaminants of concern. The Tier I Risk Assessment indicated contaminant levels were below the Tier 1 risk-based target levels for non-residential land use. In addition, the maximum concentration of each contaminant detected did not exceed 10 times the representative concentration of the contaminant. The department determined the site is safe for its intended use.



Subsurface soil investigation identified the presence of petroleum hydrocarbon contamination in the soil at the Borders Container Corporation site.

Quality Wood Products

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Quality Wood Products site located at 7400 E. 12th St. in Kansas City. The Quality Wood Products facility consists of approximately 33 acres of land improved with one approximately 600,000 square foot, L-shaped structure, reportedly built in the 1940s and added onto in 1960. The facility has historically been and is currently being used as a warehouse. There are three separate free-standing buildings located west of the southern part of the larger warehouse. The vicinity of the property is an industrial area.

The property was first developed for industrial use as the American Radiator Company in the 1940s. Vendo Company, a manufacturer of vending machines, occupied the site from the 1950s until the mid 1970s. Quality Wood Products, a manufacturer of wood cabinets, has occupied approximately 60 percent of the warehouse since the late 1980s.

Various tenants occupy the remaining 40 percent of the warehouse, including Crown Marble Company, ICA Corporation, Link Controls, Metro Floor Covering, Ranger Construction, Scott Thomas Electric, Pup Specialties and Parts, Pyramid Power Tools, Design Supply, NuBath, City Wide Fence Company, Eagle Door Supply, Lens Master and New Surface, LLC.

A Phase II Environmental Site Assessment indicated there is a reasonable basis to suspect the presence of volatile organic compounds in the groundwater in the vicinity of the northeast portion of the subject property. Tetrachloroethene, trichloroethene, cis-1,2-dichloroethene were all detected in groundwater grab samples above their default target levels. Further subsurface testing was conducted in February 2006. Four temporary groundwater monitoring wells were installed in the northeast portion of the property. The groundwater analysis indicated volatile organic compounds were not detected at or above the method detection limit in any of the samples submitted.

Initial site assessments revealed the presence of volatile organic compounds in the groundwater in the vicinity of the northeast portion of the property. Tetrachloroethene, trichloroethene, cis-1,2-dichloroethene were all detected in groundwater samples above the Missouri Risk Based Corrective Action (June 2006) default target levels. Subsequent sampling indicated the volatile organic compounds were not above the applicable risk-based target levels.

A Tier 1 Risk Assessment was used to make a determination of potential exposure pathways using existing data. Potential exposure pathways were evaluated to provide a determination as to which chemicals of concern pose an excessive risk to human health or the environment at the site. No chemicals of concern were identified above the risk-based target levels for the applicable pathways; therefore no further risk assessment or remediation appears warranted as long as appropriate activity use limitations are in place. The department determined the site is safe for its intended use.

Cupples Station Building 9 South Parking Lot

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Cupples Station Building 9 South Parking Lot site located at 421 S. 9th St. in St. Louis. This property is part of the historic Cupples Station complex built in the late 1800s, used as warehouse space and a trading and market center for railroad freight. This site is located south of Building 9 and is used as a parking lot.

Lead and mercury were detected in soils at levels exceeding Missouri Risk Based Corrective Action (June 2006) default target levels. While the mercury detected was found to meet residential risk based target levels, lead was found in several areas of surface soil at levels that exceeded residential risk based target levels. Excavation of the lead-contaminated surface soil was conducted in accordance with a department-approved remedial action plan. Confirmation sampling indicated this contaminated surface soil was successfully removed. This property was originally combined into a larger site with two adjacent parcels, one containing another parking lot and the other containing Cupples Building 9. The parcels were subsequently divided into separate sites, and Certificates of Completion have already been issued for the other parcels. The department determined the site is safe for its intended use.

This property will continue to be used as a parking lot.

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

Missouri State Highway Patrol Crime Laboratory

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Missouri State Highway Patrol Crime Laboratory site located at 425 E. Phelps St. in Springfield. This site is part of a larger site enrolled in the Brownfields/Voluntary Cleanup Program as Modern Distributing. Historical uses of the Modern Distributing site have been warehousing and commercial. Activities on adjacent properties have included a bulk oil facility, a foundry and a vulcanizer. Two underground storage tanks were present on the Modern Distributing site north of the Crime Laboratory parcel. During closure of the tanks, it became apparent a release had occurred to soil surrounding the tanks.

The State of Missouri purchased a portion of the Modern Distributing site and has redeveloped it as a crime laboratory for the Missouri State Highway Patrol.

Because of the recognized environmental conditions existing on adjacent properties and on the northern portion of the Modern Distributing site, a Phase II Environmental Site Assessment was conducted. The initial Phase II identified benzo(a)pyrene and elevated levels of lead in soil and elevated levels of metals in groundwater. Further delineation of contamination and a Tier I risk assessment were conducted. No lead above levels allowed for residential use was discovered, representative concentrations of benzo(a)pyrene were below residential standards and dissolved concentrations of metals in groundwater did not exceed the lowest risk-based target levels. The department determined the site is safe for its intended use.

This portion of the former Modern Distributing site was purchased by the State of Missouri and has been redeveloped into a crime laboratory for the Missouri State Highway Patrol.

Syndicate Trust Building

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Syndicate Trust Building site located at 915 Olive St. in St. Louis. The 1-acre site consists of a formerly vacant 17-story building in downtown St. Louis. Constructed in 1906, the building served as retail and office space. Syndicate Partners, LLC entered the site into Brownfields/Voluntary Cleanup Program for cleanup of asbestos-containing material, lead-based paint and household hazardous waste throughout the historic building.

Initial site assessments revealed asbestos-containing materials, lead-based paint and miscellaneous hazardous waste throughout the building. All interior asbestos-containing materials and lead-based paint were removed as part of the renovation of the building. The majority of exterior asbestos-containing materials in window caulking were removed; however, some of the caulk was encapsulated with new metal window frames or was entombed in the elevator shaft. Lead-based paint was scraped flush on perimeter walls, columns and ceilings and then encapsulated. An Operation and Maintenance Plan for asbestos-containing materials and lead-based paint, which provides building managers with periodic inspection protocols and response actions necessary to ensure the safety of future workers or



The Syndicate Trust Building site during renovation. The building was redeveloped into retail space, rental apartment units, condominium units and parking.

visitors, was filed in the property chain of title with the Recorder of Deeds. Waste manifests submitted with the final report document proper disposal of all materials. The department determined the site is safe for its intended use.

Syndicate Partners, LLC has redeveloped the building into retail space, rental apartment units, for sale condominium units and associated parking amenities. Its redevelopment is considered the last major piece of the overhaul of the Old Post Office District.

The project is estimated to support at least 268 new jobs.

Craig Heller, of Syndicate Partners, LLC, said, "The most exciting thing about the Syndicate is having this almost half-million-square-foot building part of the neighborhood again instead of just being an eyesore."

The \$82 million rehabilitation project was granted \$8.4 million in tax increment financing from the city of St. Louis and up to \$4.1 million in Brownfield Remediation Tax Credits from the Missouri Department of Economic Development.

Missouri Department of Natural Resources - Hazardous Waste Program

Brownfields/Voluntary Cleanup Section

Sites in Brownfields/Voluntary Cleanup

	Active	Completed	Total
OCTOBER	272	604	876
NOVEMBER	274	607	881
DECEMBER	269	611	880

New Sites Received

October

VCP 2946 Thomas St., St. Louis
Federal Cold Storage Redevelopment,
St. Louis
Dycron Plastics (former), St. Louis
North Central Redevelopment, St. Louis

November

Antioch Center Mall, Kansas City
Thurman-Blaine Filling Station (former),
St. Louis
Display Center, Hannibal
J & J Auto Sales, Hannibal
Joe Ogden's Garage, Hannibal
Hannibal Machine, Hannibal
Hannibal Auto Salvage (former), Hannibal
Ashland First Street Release, St. Louis

December

Cass House Apartments, St. Louis
Northside Development Project, St. Louis

Sites Closed

October

VCP 2839 Thomas St., St. Louis
VCP 2901 Thomas St., St. Louis
Jump Oil Tanker Release, Filley
Syndicate Trust Building, St. Louis
VCP 2904 Sheridan Avenue, St. Louis
VCP 2905 Thomas Avenue, St. Louis
VCP 2909 Thomas St., St. Louis
VCP 2910 Thomas St., St. Louis
VCP 2914 Thomas St., St. Louis
VCP 2917 Thomas St., St. Louis
VCP 2918 Thomas St., St. Louis
VCP 2919 Thomas St., St. Louis
VCP 2921 Thomas St., St. Louis
VCP 2922 Sheridan Avenue, St. Louis
VCP 2926 Thomas St., St. Louis
VCP 2927 Thomas St., St. Louis
VCP 2930 Sheridan Avenue, St. Louis
VCP 2930 Thomas St., St. Louis
VCP 2933 Thomas St., St. Louis
VCP 2934 Thomas St., St. Louis
VCP 2936 Sheridan Avenue, St. Louis
VCP 2940 Sheridan Avenue, St. Louis
VCP 2942 Sheridan Avenue, St. Louis
Roto-Die Company Inc., Kirkwood
St. Louis Post-Dispatch Printing Building, St. Louis

November

Borders Container Corporation, St. Louis
Greyhound Bus Terminal (Former), Kansas City
Quality Wood Products, Kansas City

December

Cupples Station Building 9 South Parking Lot,
St. Louis
FMC Spill Site, Clubb
Missouri State Highway Patrol Crime Laboratory,
Springfield
Mulberry MoDot, Kansas City

Missouri Department of Natural Resources - Hazardous Waste Program

Brownfields/Voluntary Cleanup Section

Drycleaning Environmental Response Trust Fund

The Department of Natural Resources' Drycleaning Environmental Response Trust, or DERT, Fund provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from dry cleaning facilities. The two main sources of revenue for the fund are the dry cleaning facility annual registration surcharge and the quarterly solvent surcharge.

Legislation was introduced in the House of Representatives (HB 192) and the Senate (SB 135) to revise Section 260.965 RSMo by extending the sunset date of the Drycleaning Environmental Response Trust Fund from Aug. 28, 2012 to Aug. 28, 2022

Registrations

The registration surcharges are due by April 1 of each calendar year for solvent used during the previous calendar year. The solvent surcharges are due 30 days after each quarterly reporting period.

Calendar year 2009	Active Dry Cleaning Facilities	Facilities Paid	Facilities in Compliance
Jan - Mar 2010	241	124	51.45%
April - June 2010	241	195	80.91%
July - Sept 2010	241	210	87.14%
Oct - Dec 2010	241	215	89.21%

Calendar year 2010	Active Solvent Suppliers	Facilities Paid	Suppliers in Compliance
Jan - Mar 2010	10	10	100%
April - June 2010	10	10	100%
July - Sept 2010	11	11	100%
Oct - Dec 2010	11	6	54.55%

Cleanup Oversight

Calendar Year 2010	Active	Completed	Total
Jan - Mar 2010	20	8	28
April - June 2010	20	8	28
July - Sept 2010	21	8	29
Oct - Dec 2010	21	9	30

New Sites Closed

American Cleaners, Bridgeton

New Sites Recieved

October

Shamrock Cleaners, Kansas City

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

Reimbursement Claims

The applicant may submit a reimbursement claim after all work approved in the work plan is complete and the fund project manager has reviewed and approved the final completion report for that work. The fund applicant is liable for the first \$25,000 of corrective action costs incurred.

	Received	Under Review	Paid/Processed
October	2	8	3
November	2	1	1
December	0	2	0

	Received	Under Review	Paid/Processed
October	\$21,819.28	\$133,005.81	\$49,008.90
November	\$32,769.72	\$20,239.88	\$16,262.91
December	\$0.00	\$39,363.95	\$0.00

Reimbursement Claims Processed:

American Cleaners (Southroads Shopping Center)	St. Louis	\$3,722.50
Busy Bee Laundry	Rolla	\$43,732.40
Fenton Plaza 48	Fenton	\$1,554.00
Yorkshire Cleaners	Marlborough	\$16,262.91

Total reimbursements as of Dec. 31, 2010: \$1,335,199.35

DERT Fund Cash Balance as of Dec. 31, 2010: \$1,805,041.00

Inspections and Assistance

Regional Office Employees

- Conducted 95 hazardous waste generator compliance inspections:
 - 20 at large quantity generators.
 - 44 at small quantity generators.
 - 31 at conditionally exempt small quantity generators.
- Conducted two e-waste compliance inspections.
- Issued 56 Letters of Warning and three Notices of Violation requiring actions to correct violations.
- Made three compliance assistance visits, one to a large quantity generator, one to a small quantity generator and one to an e-scrap facility. Compliance assistance visits are on-site visits with a representative of a facility. The visits are intended to improve the understanding of a permit, registration, certification, report or other similar requirement. Compliance assistance visits provide an opportunity to enhance compliance with environmental regulations.
- Received 76 citizen concerns regarding hazardous waste, 58 of which resulted in a field investigation.

Hazardous Waste Program Compliance and Enforcement staff

- Conducted 11 inspections of commercial hazardous waste treatment/storage/disposal facilities.
- Conducted one operations and maintenance inspection of a non-commercial hazardous waste treatment/storage/disposal facility.
- Conducted two case development inspections.
- Conducted two focused compliance inspections.
- Issued one Letter of Warning and five Notices of Violation requiring actions to correct violations.
- Issued two penalty negotiation letters.
- Worked with Attorney General's Office in filing civil judicial action for compliance or monetary penalty on a hazardous waste generator.
- Resolved and closed two hazardous waste enforcement cases.

Tanks Compliance and Enforcement Unit

- As of Dec. 3, the underground storage tank contract inspector for the department and the Missouri Petroleum Storage Tank Fund is Rounds and Associates. They are currently in the field conducting underground storage tank inspections.
- The department began inspecting every new tank installation in 2009. Not only has this effort been very successful in confirming and documenting the equipment installed, but to ensure installations are conducted in accordance with manufacturer requirements and industry standards.
- In the most recent three year inspection cycle (July 1, 2007 through June 30, 2010), the tanks compliance and enforcement unit conducted 483 inspections of temporarily closed tank facilities. In addition to these temporarily closed site inspections, staff also inspected temporarily closed tanks at some active facilities. These inspections, along with coordinated efforts from the tanks closure and technology unit, accounted for a large portion of the approximate 1,500 underground storage



Candace Bias, former staff member of the Compliance and Enforcement Section, presented information about proper management of waste pharmaceuticals at the Missouri Assisted Living Association at the Lake of the Ozarks and at the Kansas City Area Healthcare Engineers 2010 Fall Extravaganza.

tank systems closed since July 1, 2007. Proper permanent closure of underground storage tanks ensures any release from a tank is addressed. In addition, proper temporary closure was verified for at least 289 temporarily closed underground storage tanks. Even a temporarily closed tank can pose a risk of leaks and contamination if the tank is not properly emptied, monitored and maintained. Continued attention to these sites will ensure that even though a system is not in use, the potential for harm, specifically petroleum leaks and contamination, is minimized and, if found, is quickly addressed.

- To encourage even more communication between the regulated community and the department, the unit has established an Internet listserv. This listserv is being used to provide updates, determinations and proposed rule changes that impact the regulated tanks community. Additionally, it will serve as a way for the regulated community to post questions or comments to the department.
- In addition to compliance and operational issues, the unit continues to use the expedited referral process previously approved by the Hazardous Waste Management Commission. Despite being short staffed, the dedicated efforts of those involved with this procedure have minimized the number of facilities without a documented financial responsibility mechanism.
- The tanks section referred 20 facilities with financial responsibility violations to the unit for enforcement action. Staff resolved 44 enforcement cases, 21 of which had financial responsibility violations. The unit also referred 27 facilities to the Attorney General's Office for enforcement action, five of which had a financial responsibility violation.
- The unit is working with the regulated community and other stakeholders to modify the current regulations, specifically those pertaining to the operational aspects of underground storage tanks. With the rapid development of new equipment in recent years, this effort is geared toward updating the underground storage tank regulations to better align with the industry of today and help prevent future releases.

Polychlorinated Biphenyl Inspector

The inspector conducted 11 compliance inspections at various types of facilities throughout the state. The reports are forwarded to the U.S. Environmental Protection Agency Region 7, which has authority for taking any necessary enforcement action regarding PCBs according to the Toxic Substances Control Act.

Hazardous Waste Transporter Inspector

The inspector conducted 48 commercial vehicle inspections, during which three vehicles were placed out of service. As part of the Commercial Vehicle Safety Association's protocol, the department sends the reports to the Missouri Highway Patrol. The transporter must certify to the patrol the violations were corrected.

As of December 2010, there were 225 licensed hazardous waste transporters in Missouri.

Doe Run Resources Corporation (Multiple Sites in Missouri)

On Oct. 8, 2010 the U.S. Department of Justice lodged a Consent Decree with the U.S. District Court – Eastern Division of Missouri. This Consent Decree was to settle violation, penalty and permit issues involving multiple Doe Run mines, smelters and other facilities and involving multiple Missouri and federal statutes (Clean Water Act and Missouri Water Quality Law; Clean Air Act and Missouri Air Conservation Law; Resource Conservation and Recovery Act and Missouri Hazardous Waste Management Law). In addition to being required to meet numerous compliance schedule items, Doe Run Resources Corporation is also required to pay a civil penalty of \$3.5 million to the U.S. Treasury in a lump sum, and to pay the total sum of \$3.5 million in three annual installment payments to the County School Funds for Iron, Reynolds, Jefferson and Washington counties.

New Listserv Postings

The hazardous Waste Compliance and Enforcement Section's Assistance Listserv covered reporting due dates for hazardous waste generator's reports and fees, a free U.S. Department of Transportation training offered to the public, changes in used oil space heater guidance and information about who is responsible for making a hazardous waste determination.

To sign up to receive the regular email updates, visit dnr.mo.gov/env/subscribe_ecahwg.htm.
Archived listserv emails are also available from this address.

2010 - A Year in Review

Each year the permits section coordinates with the Environmental Protection Agency to prioritize activities at facilities subject to the section's oversight. The section and EPA jointly negotiate general activity goals for the section. These goals are listed in the Performance Partnership Grant Work Plan, an overarching plan that covers the department's air, water and hazardous waste programs. Specific current and future goals for the permits section and EPA's hazardous waste staff are contained in a related document called the *Multi-Year Facility Planning Strategy*. These documents collectively guide the section in planning resources and executing activities for the current and future federal fiscal years.

The *Multi-Year Facility Planning Strategy* is an "idealized" document that includes goals to be accomplished if all of the section's staff positions are filled and all projects go relatively smoothly. The *Multi-Year Facility Planning Strategy* is a "living" document. Projected task and project completion dates are routinely updated for a variety of reasons, such as staff turnover and resources, facility bankruptcy, permit appeals, corrective action dispute resolution, investigation findings leading to additional work, public comments and intervening short-term priorities. The section provides EPA with the status of the section's goals, updated with the most recent information available, and routinely coordinates new completion dates with EPA for any delayed goals.

At the end of each federal fiscal year, the section reports to EPA about all planned and unplanned activities accomplished during the year. The report to EPA focuses primarily on permitting, corrective action and groundwater inspection and evaluation activities. The following information is from the 2010 federal fiscal year report to EPA.

Federal Fiscal Year 2010 Hazardous Waste Permitting Activities

The section coordinates, both internally and with EPA, on the priority of individual projects and tasks as dictated by the National Corrective Action Prioritization System and Overall Priority Ranking System ranking for each facility, as well as goals established by the federal Government Performance and Results Act of 1993. The Permits Section periodically revises facility rankings to reflect current environmental and state/EPA project priorities. During 2010, the section did not adjust any facility rankings, but did adjust certain priorities in response to the Government Performance and Results Act goals.

During federal fiscal year 2010, the section completed the following permitting-related activities:

- Two permit renewals: Kansas City International Airport (MCI) Maintenance Base (post-closure/corrective action) and EaglePicher Technologies, LLC (post-closure/corrective action).
- One new permit: Archimica Inc. (corrective action).
- 19 Class 1 permit modifications without prior director approval.
- 18 Class 1 permit modifications with prior director approval.
- Three Class 2 permit modifications.
- One Class 3 permit modifications.
- One permit termination.

Federal Fiscal Year 2010 Corrective Action Activities

During federal fiscal year 2010, the section made progress on many corrective action activities related to site investigation, monitoring and remediation. These activities are too numerous to list here in their entirety, but following are some of the highlights.

EPA and the states developed the environmental indicator evaluation process jointly as a way to demonstrate progress in protecting human health and the environment and meet the performance and results objectives. The two environmental indicators are called “Current Human Exposures Under Control” and “Migration of Contaminated Groundwater Under Control.” These measures evaluate current environmental conditions and assess whether people are currently being exposed to environmental contamination at unacceptable levels, and whether any existing plumes of contaminated groundwater are expanding, stable or shrinking.

The section completed environmental indicator evaluations for the following facilities and determined human exposures to contamination and contaminated groundwater, if present, migration were under control.

- Safety-Kleen Systems Inc. in Columbia.
- Safety-Kleen Systems Inc. in Independence.
- Millennium Environmental in Scott City.
- Nixdorff-Lloyd Chain in Maryville.

More information concerning the overall nature and scope of the environmental indicator evaluations is available in the September 2007 *Hazardous Waste Management Commission Report*, located online at www.dnr.mo.gov/env/hwp/commission/docs/hwmc-qt-rpt-2007-4th.pdf.

During federal fiscal year 2010, the section completed three final remedy decisions, another Government Performance and Results Act goal, for the following facilities:

- Archimica in Springfield.
- Ashland Chemical in St. Louis.
- Millennium Environmental in Scott City.

Final remedy construction, another Government Performance and Results Act goal, was completed at Millennium Environmental in Scott City and Seco Products in Washington.

EPA, in coordination with the states, previously developed a format for facility “Ready for Anticipated Use” determinations to demonstrate environmental progress at facilities. During federal fiscal year 2010, the section determined the following facilities were ready for anticipated use.

- Millennium Environmental in Scott City.
- Nixdorff-Lloyd Chain in Maryville.
- Safety-Kleen Systems Inc. in Cape Girardeau.
- Safety-Kleen Systems Inc. in Columbia.
- Safety-Kleen Systems Inc. in Independence.
- Safety-Kleen Systems Inc. in St. Charles.



Archimica, Springfield.



Millennium Environmental, Scott City.

Federal Fiscal Year 2010 Groundwater Activities

As part of the Performance Partnership Grant Work Plan, the state is obligated by its EPA hazardous waste program authorization to conduct periodic groundwater evaluations at selected hazardous waste facilities, primarily facilities with active and closed land disposal units such as landfills and surface impoundments, where groundwater contamination is present or needs to be monitored to detect releases. These evaluations come in two forms, the comprehensive groundwater monitoring evaluation and the operation and maintenance inspection. The comprehensive groundwater monitoring evaluation is an overarching evaluation of the facility's groundwater monitoring systems and programs. The operation and maintenance inspection is more focused and examines groundwater sampling plans, procedures and monitoring well maintenance issues. In each case, the section assesses compliance with the applicable groundwater monitoring regulations and permit conditions. The section coordinates these evaluations with the department's Division of Geology and Land Survey and the Environmental Services Program. Each evaluation includes the collection of split groundwater samples to compare and verify the results of samples collected and analyzed by the facility.

Five operation and maintenance reports are typically scheduled for each federal fiscal year. During federal fiscal year 2010, the section completed one operation and maintenance report originally scheduled for federal fiscal year 2008 and three 2010 operation and maintenance reports. Two remaining 2009 reports and two remaining 2010 reports will be completed during 2011.

In addition to operation and maintenance reports and comprehensive groundwater monitoring evaluations, the section routinely performs a detailed review of groundwater reports submitted by our regulated facilities, using comprehensive internal checklists. These reviews identify both minor and potentially significant shortcomings with report content or project issues. Since there has been a long history of these reviews and feedback to facilities, most of the shortcomings from current reviews are minor and handled by including the findings into the facility's next operation and maintenance report or comprehensive groundwater monitoring evaluation. The section sends significant issues that might influence the representative nature of samples or data, regulatory compliance or otherwise affect project progress to the facility when discovered, rather than waiting until the next operation and maintenance report or comprehensive groundwater monitoring evaluation. Regulatory compliance issues are of major concern and are handled promptly. During the 2010 reporting period, the section completed 16 groundwater report reviews.

Financial Assurance Activities

Owners and operators of facilities actively handling hazardous waste as a permitted treatment, storage or disposal facility and facilities with post-closure care or corrective action obligations under other regulatory instruments (e.g., consent orders) are required to meet certain financial assurance and third party liability requirements. This ensures they will have enough funds set aside to close their facility, cleanup any releases of hazardous wastes or hazardous constituents and compensate third parties for bodily injury or property damage resulting from the release of those wastes or constituents, even if the facility declares bankruptcy.

The facility owners and operators submit closure, post-closure or corrective action plans, as applicable, cost estimates based on those plans and financial assurance instrument documents to the department. The section monitors the facility's financial health and conducts annual financial assurance reviews to make sure enough funding is available to cover the cost estimates for their activities. The section's goal was to conduct 43 financial reviews by the end of federal fiscal year 2010. The section exceeded this goal by conducting 62 financial reviews. In addition to these reviews, the section conducted eight resource recovery financial assurance reviews and four in-depth cost estimate reviews. More

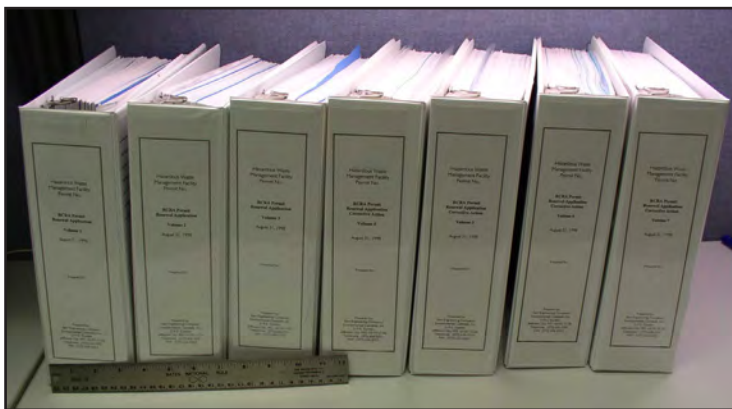
Missouri Department of Natural Resources - Hazardous Waste Program

Permits Section

information concerning financial assurance requirements is available in the March 2009 *Hazardous Waste Management Commission Report*, located online at www.dnr.mo.gov/env/hwp/commission/docs/hwmc-qt-rpt-2009-1st.pdf.

Data Management Activities

The section tracks, both internally and externally, all section activities and accomplishments. Internal tracking is done through the section's master task list database and the Division of Environmental Quality's Permit Action Management System database. External tracking is done through EPA's Resource Conservation and Recovery Act Information, or RCRAInfo, database. EPA relies almost exclusively on the information entered into the database to assess project progress and achievement of regional and national Government Performance and Results Act goals. The section enters permitting, corrective action, financial assurance, inspection, enforcement, institutional control and GIS information into the database for all state- and joint-lead activities. The section negotiates external data entry obligations with EPA and outlines them in the Performance Partnership Grant Work Plan. The section typically enters internal and external data as soon as it achieves a milestone or goal, but in no case more than 30 days after the event has occurred or documentation regarding the event is received. As new entries are made into the database, the section assesses the accuracy of historical state and EPA data. The section corrects the information as appropriate for State and joint database entries and forwards potential corrections to EPA's database entries to EPA's Missouri state coordinator for reconciliation.



The application may be multiple volumes consisting of hundreds or thousands of pages containing very detailed and highly technical information about how the facility intends to handle hazardous waste and how they intend to close when they no longer wish to be permitted.

Other Activities

The section uses the multi-year facility planning strategy process to identify and prioritize major tasks associated with individual projects. The *Multi-Year Facility Planning Strategy* document does not capture "unplanned" activities such as facility-proposed permit modifications or incremental/phased work done in support of the listed multi-year facility planning strategy goals. In some cases, unplanned work substitutes for equivalent planned work to address federal grant requirements for formal multi-year facility planning strategy goals that could not be completed as planned.

Unplanned activities include such things as facility-proposed interim measures, newly-identified solid waste management unit and area of concern investigations, ongoing involvement in national permitting and corrective action initiatives, permit modifications, state resource recovery certification and modification activities and facilities accepted into the expedited corrective action program. The section sends separate reports to EPA about activities related to standard and special conditions found in permits, orders or other agreements not reasonably predicted at the time the *Multi-Year Facility Planning Strategy* was developed.

During federal fiscal year 2010, the section worked on several issues related to facility bankruptcies, including preparing cost estimates in support of bankruptcy claims and developing agreements with facilities to perform post-bankruptcy activities using funds recovered as part of bankruptcies.

The section spent considerable time and resources on bankruptcy issues related to the following companies during federal fiscal year 2010:

- Tronox.
- General Motors.
- Chrysler.
- Asarco.

Permit Modifications List Available Online

Facilities or businesses that actively treat, store (for more than 90 days) or dispose of hazardous waste in Missouri must get a hazardous waste permit. A hazardous waste permit is a legal document that lists how and what kinds of hazardous waste the facility can manage. It also lists the facility's operating conditions and closure, corrective action and financial assurance requirements.

The Missouri Department of Natural Resources' invites the public to review list of all approved hazardous waste permit modifications for calendar year 2010. The permit modifications list is online at www.dnr.mo.gov/env/hwp/permits/publications.htm.

The department or the facility can make changes to the hazardous waste permit throughout its life. Permit modifications are labeled as Class 1, 2 or 3, depending on how much they change the original permit conditions.

Class 1 modifications include small changes that keep the permit current with routine changes to the facility or the normal day-to-day operations of the site.

Class 2 modifications include necessary changes that allow the facility to respond to changes in the type or amount of wastes handled, scientific improvements and new laws.

Class 3 modifications include issues that largely change a facility or its operations. For example: A request to handle new wastes that require different management practices.

For more information or a hard copy of the permit modifications list, contact the department's Hazardous Waste Program at 800-361-4827. Hearing and speech impaired individuals may reach the department through Relay Missouri at 800-735-2966.

Investigation into tannery sludge concludes, finds no health threat

The Superfund Section's investigation into the past application of a northwest Missouri tannery's wastewater sludge onto farm fields ended in November. After hundreds of soil and water samples were collected from northwest Missouri farm fields, residential yards and drinking water wells, the Missouri Department of Natural Resources concluded the past land application of the tannery's wastewater sludge does not pose a health threat to farmers working the fields or to residents living nearby.

The conclusion is included in a report on the investigation, available online at www.dnr.mo.gov/env/hwp/sw-sampling.htm.

The sludge had been applied as a fertilizer to farm fields in Andrew, Buchanan, Clinton and DeKalb counties for 26 years. The department began an investigation after concerns arose in 2009 about whether the sludge contained hexavalent chromium. Nearly 600 soil samples were collected from farm fields and residential yards during several sampling events conducted in 2009 and 2010. Some private residential drinking water wells were also sampled as part of the investigation. Land application of the tannery's wastewater sludge ceased in early 2009.

None of the samples exceeded the health-based screening level, 86 parts per million, or ppm, set by the Environmental Protection Agency and the Missouri Department of Health and Senior Services. The highest level detected in the fields was five parts per million.

The department also inspected Prime Tanning, the tannery that produced the sludge, and took samples of the tannery sludge in different phases of the process. Hexavalent chromium levels in the sludge at the tannery were measured at .21 ppm, significantly below the screening level of 86 ppm.

Since no health or environmental threats were discovered, no further investigation of the site is planned.



Hundreds of soil samples were taken as part of the investigation.



Part of the sampling process included grinding up soil samples into a fine powder.

A public meeting to discuss the report and results of the sampling was held Nov. 9 in St. Joseph. Documents related to the investigation, including results of the soil and water sampling and the presentation made at the Nov. 9 public meeting are available online at www.dnr.mo.gov/env/hwp/sw-sampling.htm.

Washington County District - Furnace Creek proposed to National Priorities List

In October, one of Missouri's former lead mining sites became the latest Missouri site proposed to be added to the National Priorities List. This list contains some of the more heavily contaminated sites in the United States.

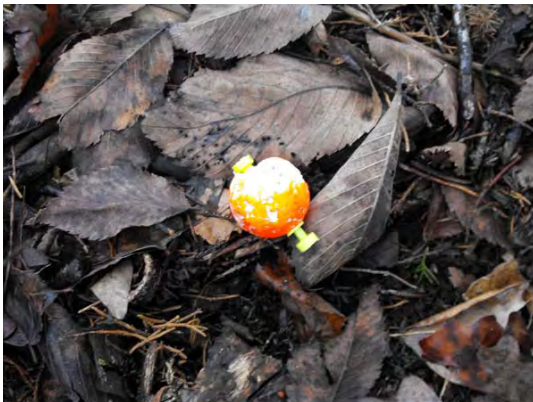
The Washington County District – Furnace Creek Site was one of nine sites in the United States EPA proposed for listing.

Located south of Potosi in Washington County, the Furnace Creek site is part of a larger group of former mining areas referred to as the Washington County Lead District and part of an even larger area known as the Old Lead Belt.

For hundreds of years, mining of some form occurred throughout the Old Lead Belt, including the Furnace Creek site. As a reminder of the mining, the site includes source piles, tailing ponds and residences with elevated levels of lead throughout the area. The piles primarily consist of overburden and tailings from mineral mining and processing. Heavy metal soil contamination is present at elevated concentrations at more than 400 residential properties



Mine tailings in direct contact with surface water at the Furnace Creek Mine tailings pond.



A fishing bobber near a tailings pond indicates fishing is occurring at the tailings pond.

The Furnace Creek site includes contamination located within a 175 square mile area in the southeastern portion of Washington County and includes residential areas within and around the towns of Caledonia, Irondale, Belgrade and Hopewell.

In June 2008, EPA began a removal assessment that included soil and groundwater sampling in the Furnace Creek area. During this sampling event, EPA contractors screened the soil at 428 residences and sampled 207 private drinking water wells. The results of this sampling revealed lead contaminated residential yards, surface water and private drinking water wells posing a significant risk human health.

Bottled water has been provided to more than 150 residences of the Furnace Creek area.

National Priorities List process and benefits

A site is not eligible for federal Superfund monies if it is not on the National Priorities List. Additionally, EPA has limited funds it can spend on cleanup of a site without it being placed on the list. The department often supports listing a site where the responsible party share is inadequate to address all of the remedial actions required at a site. Sites like Furnace Creek will require federal Superfund monies to conduct cleanup actions, as well as a 10 percent state cost share.

Missouri Department of Natural Resources - Hazardous Waste Program Superfund Section

Listing of the site often results in a number of positive outcomes. The National Priorities List will ensure the site is eligible for federal funding of complete characterization and cleanup to address the human health exposure and reduce the elevated blood lead levels of children in the area. Complete characterization will ensure off-site impacts and watershed and ecological risks are addressed. The state and local economies will be stimulated by the influx of clean up dollars and also by the potential beneficial reuse of formerly contaminated properties.

Inclusion of the Furnace Creek Site on the National Priorities List would guarantee the public an opportunity to participate in cleanup decisions. Affected communities would also become eligible for technical assistance grants from EPA to help understand technical documents and promote community involvement

After being proposed, a site goes on a 60-day public comment period. During this time period, the public can submit comments to EPA regarding the listing of a site. EPA will consider all comments when making a final decision whether to list a site or not. Comments were due Dec. 20, 2010.

If added to the National Priorities List, the Washington County – Furnace Creek site will join three other Washington County Lead District sites that are already on the National Priorities List:

- Washington County Lead District - Old Mines, Washington County.
- Washington County Lead District - Potosi, Washington County.
- Washington County Lead District - Richwoods, Washington County.

Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

Webb City Route 66 Information Center

It was once just another abandoned gas station in Missouri. The roof had caved in, the property needed cleaned. Like many of these sites, it could have sat vacant for many months or years.

Webb City officials saw potential in the building and instead of watching it slowly deteriorate, wanted to get it back to a productive use. But, there were a few hurdles.

The biggest hurdles were hidden from sight: underground water and soil contamination and six underground storage tanks.



Six underground storage tanks were removed during the redevelopment of an old gas station in Webb City.

Webb City officials contacted the Missouri Department of Natural Resources tanks section for advice about how to clean up and redevelop the abandoned gas station. The department helped coordinate the site investigation and the removal of petroleum contamination. Work at the site was funded through the Leaking Underground Storage Tank Fund, provided by an Environmental Protection Agency grant.

During the cleanup approximately 165 gallons of used motor oil, 32 tons of petroleum contaminated soil and more than 4,000 gallons of impacted water were removed from the site. Six underground storage tanks were also removed.



Ken Koon, Tanks Section Chief, participated in a ribbon cutting for the Route 66 Information Center in Webb City.

With the site no longer posing an unacceptable health risk, the city was able to move forward with redeveloping the site.

Webb City officials held a grand opening on Nov. 16, 2010 at the redeveloped abandoned gas station that is now a Route 66 Information Center. The center will house a memorabilia museum in the former garage bays and the city's Chamber of Commerce offices. The site will also be used for functions such as historic car shows and a fall festival.

Webb City officials invited the department to attend the event and speak at the event. Ken Koon, Tanks section chief, attended and spoke about the department's involvement in investigating and removing petroleum contamination at the property. The Missouri Director of Tourism, a spokesperson from the Missouri Department of Transportation and several state and local elected officials also spoke at the ceremony.

Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

Abandoned underground storage tanks pose environmental threats and economic development barriers for the redevelopment and reuse of properties. Often, these sites sit vacant for many years, not only being an eyesore for the community but continuing to be a possible environmental threat.

Like with Webb City, the department can help remove these environmental threats and economic barriers at abandoned gas stations or other properties that may have actual or perceived contamination.

A video from the grand opening is on the department's website at www.dnr.mo.gov/env/hwp/rte66infocenter.htm.

High Point Elementary School

The High Point Elementary School, located along Highway C in High Point, Moniteau County, discovered benzene in its drinking water in March 1999, during required periodic monitoring conducted under authority of the department's Water Protection Program's Drinking Water Branch. Benzene is a volatile organic chemical that is a constituent of gasoline and diesel fuel. The maximum contaminant level for benzene in drinking water is five parts-per-billion, or ppb. The department has analyzed water samples from the school periodically since March 1999. The levels of benzene contamination remained below the maximum contaminant level until December 2007 when the results were 5.7 ppb. Subsequent sampling conducted in January 2008 found benzene levels of 15.4 ppb in the school's water. As a result of the benzene contamination, the school had to discontinue the use of their well and begin using bottled water.

The department identified at least five sites in High Point that either currently operate or have formerly operated petroleum storage tanks. Of those, one is known to have had petroleum releases. The department conducted an investigation to determine the source of the contamination but no definite source could be determined. If a source can be definitively determined in the future and there is a viable responsible party, the department will seek cost recovery and will work with the responsible party to fully address any remaining contamination.

The department used federal funding sources to supply bottled water to the school until a new well became operational. In addition, personnel of the department's Tanks Section developed specifications for installation of a new drinking water well to serve the school and for proper abandonment of their existing well. The department went through a formal contract process to select the environmental consultant that performed the work. The consultant completed the design of the new system and the department's Drinking Water Branch issued the required permit to install the system.

Work to install the new system began the week of July 27, 2009. The well was completed in August 2009. Final approval and certification of the drinking water system at the school was delayed due to the appearance of higher than normal levels of iron and hydrogen sulfide in the well water, which can be an issue with groundwater in that part of Moniteau County. An application for a permit for the addition of a filtering system was obtained in spring 2010 to deal with higher than normal levels of iron



and hydrogen sulfide in the well water. After a permit was approved and the contractors were able to schedule the installation, the final addition of a filtering and chlorination system was completed in December 2010 during Christmas break so as to not affect normal functioning of the water at the High Point School.

Fee stats

The tanks section processed underground storage tank registration fee invoices for the timeframe of Oct. 1, 2010 through Sept. 30, 2015. This year, special attention was placed on contacting any owners or operators that might have changed during the year that had not notified the department with the updates. As a result, out of 1,095 invoices mailed, only 43 facilities still have a balance due. This resulted in a 96 percent rate of compliance with the requirement to pay fees. Only four percent of the facilities being sent an invoice still have an outstanding balance. The tanks section will continue to resolve these issues in a prompt manner.

The tanks section also issued 1,150 certificates of registration during the 2010 state fiscal year. In order to receive and maintain the certificate, which is necessary to own or operate underground storage tanks in Missouri, the tanks at this facility must be kept in compliance with the requirements of Sections 319.100 to 319.137, RSMo, and regulations adopted by the department in accordance with the provisions of these sections. If at any time the facility fails to comply with any provision of sections 319.100 to 319.137, RSMo, and the associated regulations, the certificate may be invalidated.

Petroleum Storage
Tanks Regulation
December 2010

Staff Productivity	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	TOTAL
Documents received for review	183	230	165	178	167	165	0	0	0	0	0	0	1,088
Remediation documents processed	194	151	164	127	207	166	0	0	0	0	0	0	1,009
Closure reports processed	14	14	14	15	11	4	0	0	0	0	0	0	72
Closure notices approved	8	2	4	11	8	8	0	0	0	0	0	0	41
Tank installation notices received	2	2	6	6	6	5	0	0	0	0	0	0	27
New site registrations	3	2	5	3	1	3	0	0	0	0	0	0	17
Facility Data													
Total active and closed USTs	40,065	40,072	40,075	40,094	40,108	40,124	0	0	0	0	0	0	
Total permanently closed USTs	30,539	30,571	30,595	30,617	30,646	30,667	0	0	0	0	0	0	
USTs active and temporarily closed	9,526	9,501	9,480	9,477	9,462	9,457	0	0	0	0	0	0	
USTs in temporary closure	918	889	883	890	850	863	0	0	0	0	0	0	
Total hazardous substance USTs	394	394	395	395	395	395	0	0	0	0	0	0	
Facilities with active USTs	3,606	3,592	3,587	3,586	3,581	3,578	0	0	0	0	0	0	

Closures

Underground Storage Tanks	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	TOTAL	All Yrs
Closure Reports Reviewed	14	14	14	15	11	4	0	0	0	0	0	0	72	
Closure Notices Approved	8	2	4	11	8	8	0	0	0	0	0	0	41	
Number of Tanks Closed (Closure NFA)	14	51	53	24	59	16	0	0	0	0	0	0	217	

Cleanup

Underground Storage Tanks	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	TOTAL	All Yrs
UST release files opened this month	6	10	10	7	6	7	0	0	0	0	0	0	46	6,260
UST cleanups completed this month	8	16	21	4	14	6	0	0	0	0	0	0	69	5,365
Ongoing UST cleanups	911	905	900	903	895	895	0	0	0	0	0	0		
Aboveground Storage Tanks														
AST release files opened this month	0	1	1	0	1	0	0	0	0	0	0	0	3	442
AST cleanups completed this month	2	1	0	0	0	1	0	0	0	0	0	0	4	275
Ongoing AST cleanups	166	166	167	167	168	167	0	0	0	0	0	0		
Both UST and AST														
Total release files-both UST & AST	0	0	0	2	0	0	0	0	0	0	0	0	2	71
Cleanups completed-both UST & AST	0	1	0	0	0	0	0	0	0	0	0	0	1	42
Ongoing cleanups-both UST & AST	28	27	27	29	29	31	0	0	0	0	0	0		
Unknown Source														
Total release files-unknown source	1	1	3	2	6	2	0	0	0	0	0	0	15	297
Cleanups completed-unknown source	1	1	5	1	4	3	0	0	0	0	0	0	15	188
Ongoing cleanups-unknown source	126	122	110	109	110	109	0	0	0	0	0	0		
Documents Processed	194	151	164	127	207	166	0	0	0	0	0	0	1,009	
*Reopened Remediation Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	78

Effective December 2008 tanks with unknown substance will be included in total figures. Some measures are re-calculated each month for all previous months to reflect items added or edited after the end of the previous reporting period.